

Improvements relating to motor vehicles

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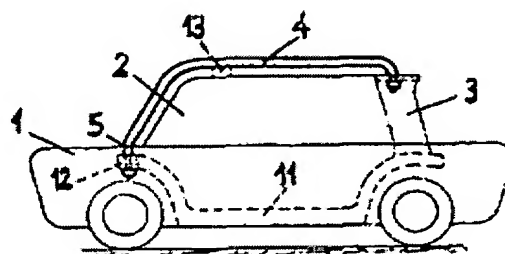
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Abstract of GB961122

961,122. Vehicle protection guards. DAIMLER-BENZ A.G. May 23, 1963 [May 29, 1962], No. 20685/63. Heading B7B. A vehicle having a roof support 3 has a guard 4 releasably or permanently secured to it and to the chassis at 12. If the roof support is centrally positioned the guard can extend fore-and-aft of the support and further members may also be connected between the support and the car body.

FIG.1



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PATENT SPECIFICATION

DRAWINGS ATTACHED

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COMPLETE SPECIFICATION

Improvements relating to Motor Vehicles

We, DAIMLER-BENZ AKTIENGESELLSCHAFT, of Stuttgart-Untertürkheim, Germany, a Company organised under the laws of Germany, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention concerns improvements relating to motor vehicles having a transverse frame member supporting the roof. The provision of such transverse frame members often allows additional roof-supporting means, for example roof pillars, to be dispensed with, so that vision from the interior of the vehicle is substantially improved. The roofs of such vehicles, however, are not so robust that they can withstand forces which substantially exceed the forces occurring during normal driving. In particular, in the event of an accident in which the vehicle is overturned, there is a danger that the roof, and hence also its glazing, may be damaged if not completely destroyed, which would necessarily lead to serious injury to the occupants of the vehicle. The invention seeks to avoid these disadvantages without substantially impairing the conditions of vision.

According to the invention, a motor vehicle has a transverse frame member supporting the roof and one or more additional frame members which are disposed outside the roof at a distance from its outer skin and are connected to the transverse member. These additional frame members which, despite small cross-section, can provide a very sturdy construction, will prevent the actual upper part of the vehicle from coming into contact with the ground if the vehicle overturns and will take the forces which occur in such cases, so that the upper part of the vehicle will be effectively protected against damage. It is particularly advantageous if the transverse frame member itself is also disposed outside

the roof at a distance from its outer skin.

An additional frame member may be disposed in the longitudinal central vertical plane of the vehicle and may extend forwardly and/or rearwardly from the transverse frame member. Such frame members may also be disposed symmetrically to the longitudinal central vertical plane of the vehicle and extending straight or obliquely forwardly and/or rearwardly.

The frame members may be tubes, preferably of circular cross-section. Alternatively, they may profiled bars, preferably of T-shaped cross-section. The frame members may advantageously be covered by a protective and/or decorative strip or sheath made of rubber, synthetic plastic or light metal.

The frame members not only serve to protect the upper part of the vehicle, but they can also be used with advantage for the mounting or attachment of lamps, luggage racks and similar accessories and/or, if desired, for the attachment of door and/or roof hinges. The frame members may be detachably mounted on the vehicle wholly or in part.

Several embodiments of the invention by way of example will now be more fully described with reference to the accompanying diagrammatic drawing, in which:—

Figure 1 it a side elevation of a passenger motor car and

Figures 2 to 7 are plan views of cars having different arrangements of frame members.

In all the examples, 1 designates the lower part of the vehicle or its outline and 2 the upper part of the vehicle with the roof or its outline and 3 a transverse frame member supporting the roof.

In the car shown in Figure 1 and, in a diagrammatic plan view to a smaller scale, in Figure 2, the transverse member 3 is disposed in the region of the rear edge of the roof 2. It is supported by its legs on longi-

tudinal bearers 11 of the lower part 1 of the vehicle, which are elevated at the rear. A further frame member 4 connected to the member 3 runs in the longitudinal central vertical plane of the vehicle. In the region of the front edge of the roof 2, it extends in a curve at a distance from the outer skin of the roof and the front glazing panels down to the lower part 1 of the vehicle, where it is connected at 5, for example, to an elevated transverse bearer 12 connecting the longitudinal bearers 11. The member 4 may be secured either permanently or detachably to the member 3 and/or to the lower part 1. In the case of very long members 4, it may be advantageous to provide a spacer 13 between them and the surface of the roof.

The cars illustrated in Figures 3 and 4 have a central transverse frame member 3 to which are connected frame members 4 which extend in the longitudinal central plane of the vehicle rearwardly or forwardly to the lower part 2 of the vehicle to which they are secured at 5. A longitudinal frame member 4 located on one side of the transverse member 3 may project beyond the latter, as shown in Figure 4, and may carry a lamp 14 at its free end. Such a lamp will afford very good visibility even at a long distance because of its high position. It may serve, for example, as a warning light in the event of accident or breakdown.

Figure 5 shows a car having frame members 4 which extend from a central transverse frame member 3 forwardly and rearwardly in the longitudinal central vertical plane.

A forwardly directed longitudinal frame member 4 and frame members 6 which extend rearwardly parallel, and symmetrical in relation to, the longitudinal central plane are connected to the transverse frame member 3 of the car illustrated in Figure 6. Instead frame members 7 may be provided which, as indicated in broken lines in Figure 6, extend obliquely rearwardly, diverging towards their free ends. The member 4 may alternatively be directed rearwardly and the members 6 or 7 forwardly.

Members 6 and 7 disposed symmetrically in relation to the longitudinal central plane of the vehicle may be used alone in conjunction with the transverse member 3, as illustrated in Figure 7. In this figure, the members 7 extending obliquely rearwardly and forwardly are connected to the central transverse member 3. However, instead of or in addition to this arrangement, parallel frame members 6 extending rearwardly and/or forwardly may be provided. Parallel members 6 directed rearwardly are indicated in broken lines in Figure 7. The members 6 are also connected to the lower part 1 of the vehicle at 8.

The frame members illustrated, including the transverse frame member if it is located outside the roof, act as a kind of pro-

TECTIVE grid which, particularly in the event of overturning of the vehicle, will protect the upper part from contact with the ground and thus from serious damage. They will act as skids and consequently have a bumper action. Whilst still affording adequate strength, the frame members can be made so thin and can be so disposed that they do not appreciably impair the driver's field of vision. Thus the said members may in particular be tubes with a circular cross-section or bars with a T-shaped cross-section, that is to say sections which possess great strength even when of small dimensions. The frame members may be covered with protective and/or decorative strips or sheaths, preferably made of rubber or synthetic plastic, or of aluminium or other light metal, which is particularly suitable for the purpose because attractive colour effects can be obtained by anodisation or eloxation.

Apart from lamps, luggage grids and other accessories for the vehicle can be easily mounted on the external frame members. The latter may also be used for the mounting of door and/or roof hinges.

The invention is also applicable to omnibuses.

WHAT WE CLAIM IS:—

1. A motor vehicle having a transverse frame member supporting the roof and one or more additional frame members which are disposed outside the roof at a distance from its outer skin and are connected to the transverse member.

2. A vehicle according to claim 1, wherein the transverse member is disposed outside the roof at a distance from its outer skin.

3. A vehicle according to claim 1, or 2, wherein an additional frame member is disposed in the longitudinal central vertical plane of the vehicle and extends forwardly and/or rearwardly from the transverse member.

4. A vehicle according to any of claims 1 to 3, wherein additional frame members extend from the transverse member, symmetrically in relation to the longitudinal central vertical plane of the vehicle, straight or obliquely forwardly and/or rearwardly.

5. A vehicle according to any one of claims 1 to 4, wherein the frame members are tubes.

6. A vehicle according to any one of claims 1 to 4, wherein the frame members are profiled bars.

7. A vehicle according to any one of claims 1 to 6, wherein the frame members are covered with a protective and/or decorative strip or sheath.

8. A vehicle according to any one of claims 1 to 7, wherein lamps, luggage grids or like accessories and/or door and/or roof hinges are mounted on the frame members.

9. A vehicle according to claim 8, wherein lamps are mounted on the ends of longitudinal

frame members projecting beyond the transverse member.

10. A vehicle according to any one of claims 1 to 9, wherein the frame members are detachably mounted on the vehicle wholly or in part.
- 5 11. A motor vehicle substantially as here-

inbefore described with reference to the accompanying drawing.

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